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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/939,004	08/24/2001	Joseph M. Fukumoto	PD-01W007	3410
23915	7590	10/01/2003	EXAMINER	
PATENT DOCKET ADMINISTRATION RAYTHEON SYSTEMS COMPANY P.O. BOX 902 (E1/E150) BLDG E1 M S E150 EL SEGUNDO, CA 90245-0902			NGUYEN, TUAN M	
			ART UNIT	PAPER NUMBER
			2828	

DATE MAILED: 10/01/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/939,004

Applicant(s)

FUKUMOTO, JOSEPH M.

Examiner

Tuan M Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.


- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.


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Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Komine ('173).

With respect to claim 1, Komine shows in figures 1, 3 and 8, first means (15) for shifting energy at a first wavelength and outputting said shifted energy at a second wavelength, said second wavelength being a secondary emission of energy induced by a primary emission generated from said first wavelength by said first means and second means (14, 16) disposed in functional alignment with said first means for containing said primary emission and enhancing said secondary emission, note col. 3 line 51 to col. 6 line 65 and col. 8 lines 52-67.

With respect to claims 2-8, Komine discloses first and second reflective means (15 and 14, 16) have high reflectivity at a wavelength of the primary emission; first reflective means (15) has high reflectivity at second wavelength of the secondary emission; and the second reflective means (14, 16) is at least partially transmissive at said second wavelength with predetermined reflectivity at a wavelength of the secondary emission; wherein said first and second reflective means (14, 16) are first and second mirror., see figures 3 and 8.

With respect to claims 9 to 15, Komine discloses the first means is a crystal (15) and crystal is PTA, crystal is X/Y cut and the first wavelength is approximately 1.06 microns and

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second wavelength is approximately 2.59 microns and 3.76 microns an primary emission includes energy at 1.53 microns, note col. 1 line 51 to col.10 line 46, see figs. 1-11.

With respect to claims 16-18, Komine discloses a laser (11) for generating energy at a first wavelength, an optical parametric oscillators (12, 13) includes a crystal (15), the reflectors (14, 16), note col. 1 line 51 to col.10 line 46, see figs. 1-11.

Response to Arguments

2. Applicant's arguments filed on April 02 2003 have been fully considered but they are not persuasive.

On pages 2-3 Applicant defined that " the first mechanism is an optical parametric oscillator having a crystal such as potassium titanyl arsenate. The crystal may be X-cut , Y-cut, ect. The second mechanism then includes first and second reflective elements. The first and second reflective element has high reflectivity at a wavelength of the primary emission. The first reflective element also has high reflectivity at the second wavelength of the secondary emission, and the second element is at least partially transmissive at the second wavelength of the secondary emission ... the invention is set forth in claims 1 of varying scope of which claims 1 is illustrative. Claims 1 recites:

1. An arrangement comprising:

first means for shifting energy received at a first wavelength and outputting said shifted energy at a second wavelength, said second wavelength being a secondary

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emission of energy induced by a primary emission generated from said first wavelength by said first means, and

second means disposed said in functional alignment with said first means for containing said primary emission and enhancing said secondary emission thereby.

(emphasis added.)”.

Then Applicant concluded “non of the reference, teach, discloses or suggest the invention as presently claimed. That is non of the references, taken alone or in combination, teach, discloses or suggest an arrangement comprising first means for shifting energy to provide primary and secondary emissions and second means for containing the primary emission and enhancing the secondary emission thereby”. It is disagreed because Komine discloses the first mechanism is an optical parametric oscillator having a crystal such as KTP or KTA (15). The second mechanism then includes first and second reflective elements (14, 16). The first and second reflective elements have high reflectivity at a wavelength of the primary emission. The first reflective element also has high reflectivity at the second wavelength of the secondary emission, and the second reflective element is at least partially transmissive at the second wavelength of the secondary emission (see figs. 3 and 8). Komine discloses all elements and functions as set forth of the claim. Therefore, Applicant’s argument is not persuasive. Claims 1-18 are not patentable over Komine.

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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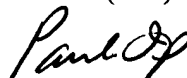
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Communication Information

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuan M Nguyen whose telephone number is (703) 306-0247. The examiner can normally be reached on 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3329.



Paul Ip
SPE
Art unit 2828

TMN
September 25, 2003